

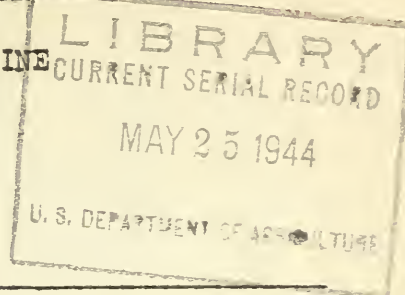
Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



1.9
En 831 B
Cop. 2

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE



INSECT PEST SURVEY

Special Supplement

May 15, 1944

ESTIMATES OF DAMAGE TO CORN BY THE EUROPEAN CORN BORER IN 1943

By A. M. Vance, Entomologist
Division of Cereal and Forage Insect Investigations

It is estimated that the European corn borer in 1943 caused a loss of about \$33,360,000 to a corn crop valued at approximately \$747,000,000 grown in the northeastern part of the United States from the Atlantic coast westward across the Corn Belt and into eastern Iowa and Missouri. The estimate of damage in 1943 is almost double that of the \$17,000,000 estimated loss in 1942, due (1) to increased corn borer abundance, in general, and especially to the effect of larger populations in vast acreages of corn in the Corn Belt, and (2) to higher prices for all types of corn. Both the 1942 and 1943 estimates included at least 90 percent of the total loss caused by the borer in this country in either year.

The 1943 estimates were made by the same procedure used in the preparation of similar estimates in previous years, as follows: (1) Established damage indices of 3-, 5-, and 8-percent loss per borer per plant, in corn for grain, canning sweet corn, and market sweet corn, respectively, were applied to populations of the insect found in each county surveyed in the fall of 1943 to obtain percentages of loss in the types of corn represented. (2) Values of the corn crop in each county were estimated, and the money loss caused by the borer was calculated by applying to them the estimated percentages of loss. To obtain these values, data on corn production and current market prices were taken from the 16th Agricultural Census (1940), from reports of the Bureau of Agricultural Economics and the Agricultural Marketing Administration of the U. S. Department of Agriculture, and from various State and city organizations which generously supplied information. (3) The county data were combined to show the money loss of corn for grain and of sweet corn, for each State and for the surveyed area as a whole.

The 1943 estimates of damage are presented in table 1. They were prepared on the basis of 13,294,954 acres of corn for grain, with an estimated crop value of \$718,492,693 and 240,292 acres of sweet corn, with an estimated crop value of \$28,540,436. The combined acreage of grain and sweet corn was 13,535,246 and the estimated crop value of both totaled \$747,033,129. The estimated total loss caused by the European corn borer to the corn crop in the area surveyed in 1943 was \$33,363,518. Of this amount 83.3 percent, or \$27,800,740, occurred in corn harvested for grain, and 16.7 percent, or \$5,562,778, in sweet corn.

Table 1.--Estimates of damage by the European corn borer to corn harvested for grain and to sweet corn in the 337 counties surveyed in 1943 of the 781 counties known to be infested

State	Number	Corn harvested for grain				Sweet corn				Total esti-	
		Counties	Extent of area surveyed	Estimated value of crop	Estimated loss of crop value	Extent of area surveyed	Estimated value of crop	Estimated loss of crop value	Estimated loss of crop value	Estimated loss of crop value	Estimated loss of crop value
			Acres	Dollars	Dollars	Acres	Dollars	Dollars	Dollars	Dollars	Dollars
Connecticut	6		6,766	376,067	89,596	2,743	746,096	497,636	587,232		
Delaware	3		134,850	4,748,808	293,379	3,573	231,672	50,603	343,982		
Illinois	41		4,260,681	241,736,500	6,342,284	66,013	3,592,576	257,247	6,599,531		
Indiana	78		3,605,195	187,455,474	11,209,619	28,201	2,314,228	301,264	11,510,883		
Iowa	20		1,373,722	81,943,723	603,346	1,675	321,600	3,860	607,206		
Maine	14		4,992	268,570	1,014	8,779	1,115,812	8,212	9,225		
Maryland	8		183,178	6,476,653	428,010	9,913	274,177	28,774	456,784		
Massachusetts	6		6,006	328,932	28,885	4,491	1,185,624	358,532	387,417		
Michigan	14		442,048	20,094,380	493,682	6,474	1,450,176	69,335	563,017		
Missouri	8		280,074	11,810,660	6,439	854	163,968	168	6,607		
New Hampshire	9		3,106	192,023	773	1,222	322,608	3,162	3,935		
New Jersey	19		123,637	26,400,230	472,789	20,450	5,454,820	1,383,704	1,856,493		
New York	21		101,811	4,548,747	107,895	27,496	4,713,928	894,441	1,002,336		
North Carolina	3		50,001	1,842,430	129,012	392	87,808	13,160	142,172		
Ohio	33		1,762,683	100,026,660	3,703,521	16,412	1,868,128	174,724	3,878,245		
Pennsylvania	28		754,527	42,322,337	3,482,813	19,758	3,560,880	1,450,052	4,932,865		
Rhode Island	2		1,435	52,988	6,158	385	101,640	38,791	44,949		
Vermont	10		6,920	342,768	2,689	1,433	145,662	2,947	5,636		
Virginia	5		89,781	3,122,254	328,791	341	76,384	5,598	334,389		
Wisconsin	9		103,541	4,402,489	70,045	19,687	812,649	20,568	90,613		
Total	337		13,294,954	718,492,693	27,800,740	240,292	28,540,436	5,562,778	33,363,518		